LOW PAY, LIVING STANDARDS AND EMPLOYMENT

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As a prelude to discussion of the role of industrial relations and wage-setting institutions in Chapter 3 and the impact of labor market institutions on labor supply in Chapter 4, this chapter describes the importance and characteristics of low-wage work and the living standards and working conditions of low-wage workers in the six countries. The chapter first examines how each country compares in terms of the incidence of low pay, the evolution of low-paid shares of employment, the characteristics of low-paid jobs and workers, and also the chances of low-paid workers eventually succeeding in moving to higher pay brackets over time. It then compares what being low-paid in each country means in terms of the purchasing power of low wages; working conditions and living standards, taking account of employer- and state-provided non-wage benefits such as health and pensions; and the extent of any overlap between low pay and household poverty. The assessment of living standards is subsequently broadened to take account of inter-country differences in employment and unemployment rates. In particular, we consider evidence on the extent and nature of any trade-off between employment rates and wage equality.

1 Low pay: definition, level and evolution

The low-pay threshold (LPT) below which wages are considered to be low is defined here relative to the distribution of wages. This approach offers the practical advantages of being endorsed by the OECD and EU, adopted in many datasets and being easier to calculate in international comparison[1]. It also avoids the difficulties of defining an absolute level of low pay that is genuinely comparable across all six countries. A correction for diverging price levels as provided by purchasing power parities would not fully resolve the difficulties as it would not capture inter-country variation in collective provision of services that employees or employers do not have to pay for directly such as health care (discussed further in Section 2.6 below). A more positive argument for a relative measure of low pay is that the concept of 'low' is relative in itself: employees and employers experience their earnings and labor costs respectively as low in comparison to others around them.

The specific definition of low pay that we adopt is earning less than two thirds of the gross hourly median wage. Compared to the often-used quantiles of the distribution, say the bottom 30%, which generate an incidence of low pay that by definition remains the same, this offers the possibility of change over time and enables linkage to the density of the distribution. Taking the median as a base instead of the mean wage mitigates the effect of the few extremely high wages at the upper end of the distribution and possible measurement error at the lower end[2]. The definition is further based on *hourly* wages to enable coverage of part-time workers whose importance differs significantly across countries and has been growing over time in most countries, sometimes very considerably. The hourly approach also permits a more precise treatment of full-time workers whose hours vary substantially across individuals and countries as well as over time, in part because of the drastic shortening of the working week in some countries.[3] Finally, it should be stressed that the present section considers only gross wages for the worker. Other wage concepts such as wages net of taxes and employee contributions as received by workers, and gross labor compensation including payroll taxes and employer contributions as paid by firms are discussed below in Section 2.5.

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[1] Some American research (e.g. Mishel *et al.* 2007) applies absolute poverty-level wages derived from household poverty levels. However, these complicate labor market analysis as they correspond with very different individual wage levels in the labor market. They are also extremely demanding in terms of data availability and treatment, especially in international comparison. For a discussion see Lucifora and Salverda, 2008.

[2] The US mean is 29% above the median as against 12 to 13 % in Denmark, Germany and the Netherlands, with the UK and France in between, according to the OECD earnings deciles dataset (various years 1999-2005).

[3] It should be noted, however, that measurement error may be increased as hourly pay has to be calculated from period wages and period hours.

As shown in Table 2.1, Row 1, the six countries differ greatly in the incidence of low pay. However, the pattern of difference only coincides partially with traditional expectations that the US and UK would have much higher rates of low-wage employment than the Continental European countries and that the incidence of low pay would be lowest in Scandinavian countries. In fact the US does still have the highest rate of low pay and Denmark the lowest. However, as a result of recent rapid growth in pay inequality in Germany, that country comes very close to the US in terms of the low-paid share of employment and now slightly exceeds the rate of low pay in the UK.[4] Between these extremes France is fairly close to the low Danish level, while the Netherlands is in the middle, following rapid growth between 1985-98.

Table 2.1 Rate of low pay among employees* and working-age population, %, 2003-2005

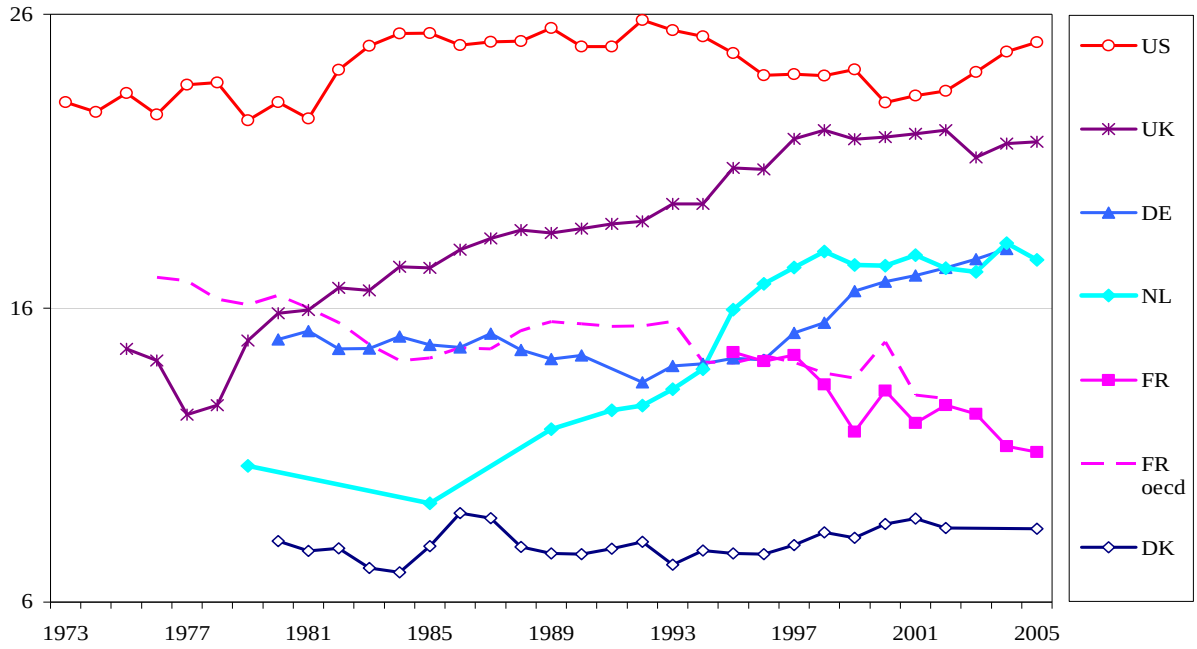
	Denmark	**France**	**Germany**	**Nether-lands**	**United Kingdom**	**United States**
% employees below low pay threshold, head count	8.5	11.1	22.7**	17.6	21.7	25.0
% population below low pay threshold, head count	6.2	6.4	11.8	11.2	13.6	16.3
Year	2005	2005	2005	2005	2005	2003-05
Source	CCP / IDA	INSEE, Enquête Emploi	German Socio-Economic Panel	CBS, Loonstruc-tuuronder-zoek	NSO, Annual Survey of Hours and Earnings	BLS, Current Population Survey

*) Excluding apprentices in Denmark and Germany.
**) 22.0% if East and West are treated separately.

Figure 2.1 shows the evolution of low pay in each country. Strikingly, the US level was already high in the 1970s and has changed little since then. By contrast, other countries such as the UK, the Netherlands and Germany have moved closer to the American level which has remained fairly stable since the mid-1980s. The Danish rate of low pay has remained consistently low while the French level seems to have gradually fallen since the late 1990s.

[4] However, relative to the working-age population, traditional expectations are warranted as the UK and US have higher employment rates than Germany (Table 2.1, Row 2).

Figure 2.1 Evolution of rate of low-wage employment, %, 1973-2005

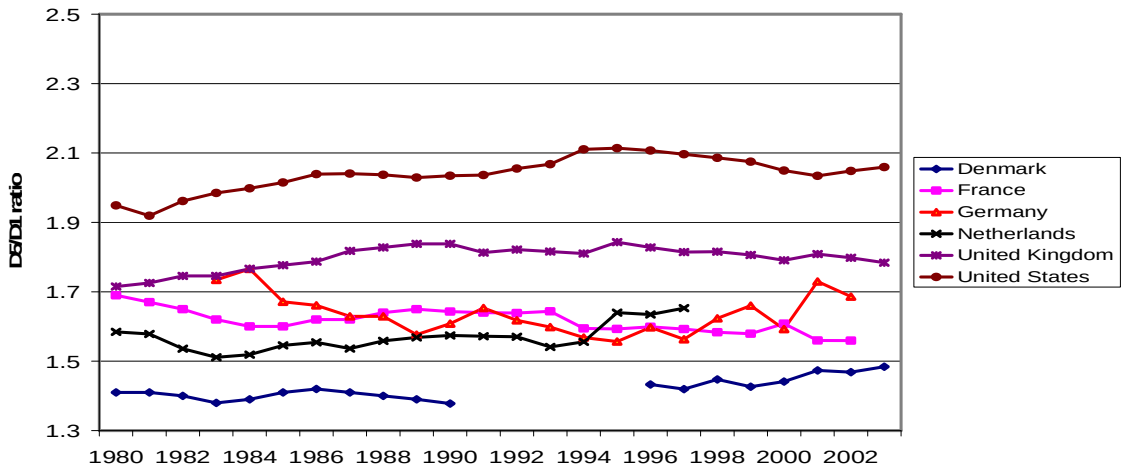


Notes: For some countries these data are not directly comparable with the estimated shares of low-paid employment in Table 2.1 which cover part-time as well as full-time workers. In this chart the data for France (dotted line) are roughly estimated from OECD data on the earnings distribution of full-time workers only. For Germany the data refer only to full-time workers excluding civil servants; the calculations were derived from the IAB regional sample (IABS-R01) and the BA employee panel by Thorsten Kalina; the US data are approximated by linear interpolation from Mishel et al. (2007), Table 3.4.

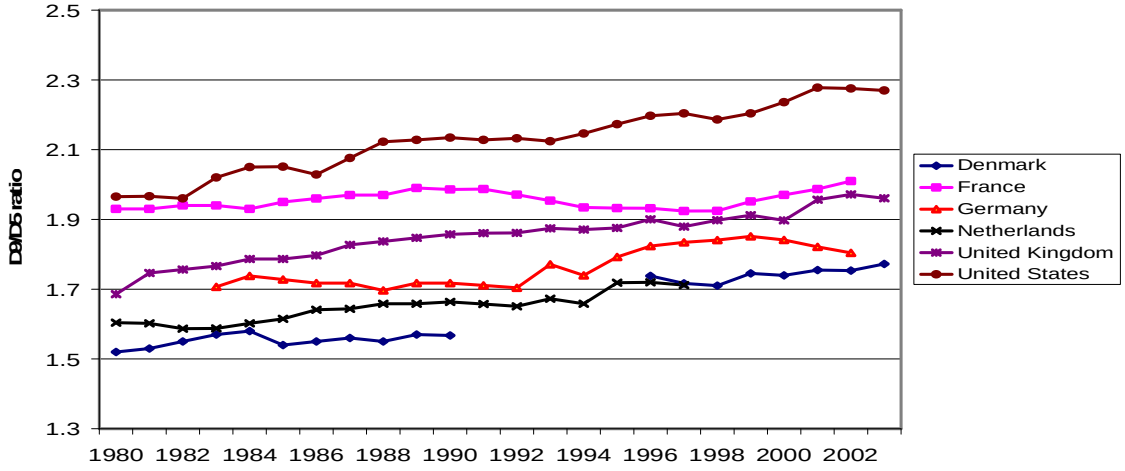
Given that the low-pay thresholds are defined as a proportion of hourly median earnings, it is not surprising that many of the trends in the incidence of low pay shown in Figure 2.1 are broadly reflective of trends in income dispersion in each country. For example, the ratio of fifth decile (D5) to first decile (D1) earnings for full-time employees in the US settles around the 2.0-2.1 level from the mid-1980s onwards (Figure 2.2, Panel A). In the UK the increase in the D5/D1 ratio between the early 1980s and mid-1990s mirrors the rising incidence of low pay during that period. The Dutch D5/D1 ratio rises in the early 1990s as did the low-paid share of employment. In Germany the rising trend in the D5/D1 ratio from 1995 onwards is mirrored in the low-pay measure. Similarly, in France and Denmark the correspondences between trends in the D5/D1 ratio and the incidence of low pay are also apparent.

Figure 2.2: Decile ratios (gross earnings of full-time employees), 1980-2003

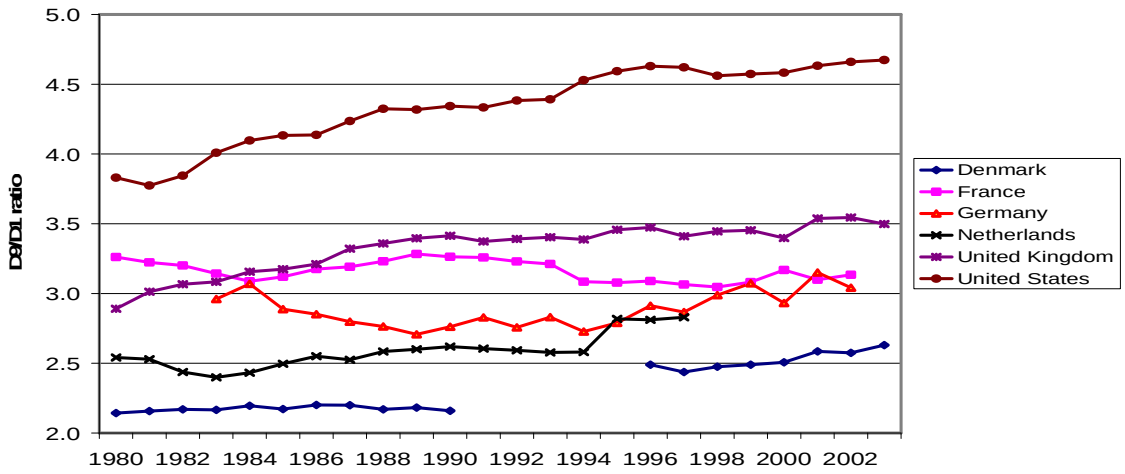
A. D5/D1



B. D9/D5



C. D9/D1



Source: Authors' estimates based on OECD Earnings Database and statistical supplements attached to OECD, Society at a Glance, 2007; OECD, Employment Outlook, 1996; and OECD, Employment Outlook, 2007.

What stands out in particular from this and other measures of earnings dispersion shown in Figure 2.1, Panel B (D9/D5 ratios) and Panel C (D9/D1 ratios) is the relatively compressed wage structure in Denmark and the relatively wide dispersion of wages in the UK and – especially – in the US. In France, Germany and the Netherlands there has been a degree of convergence in earnings dispersion in recent years to a position intermediate between Denmark and the UK. The rapid growth of D9 earnings relative to median earnings in the US over much of the period since 1980 is striking and shows how stability in the incidence of low pay can easily coexist with widening dispersion of incomes as a whole.

To help explain these developments, Chapter 3 below considers the impact of national-institutional structures, in particular, changes in the role and influence of unions and collective bargaining institutions which have traditionally helped to compress incomes and shore up pay levels at the bottom end of national labor markets.

2 Personal and job characteristics of low-paid employment

In many respects the groups most vulnerable to low-paid employment in each country are quite similar. Multivariate analysis indicates that the probability for an individual of being in low-paid employment is greater in all six countries for women compared to men; for youths up to 30 years compared to older persons; for the least educated compared to those with better education; for those working in service, sales, crafts, production and elementary occupations compared to clerks (the reference occupation) and other occupations; for those working in trade or hotels and catering compared to manufacturing, utilities and construction; and for those already employed in a low-paid job in the previous year (see Appendix Table A1).[5]

[5] The probit estimates shown in Appendix Table A1 are derived from a more developed model compared to the national monographs. Following Cappellari and Jenkins (2004), a multivariate five-equation probit model with endogenous selection and endogenous switching is estimated that corrects for selection bias, initial conditions, (non-random) panel attrition and genuine state dependence (as visible in the large effect of low pay in the previous year). Compare Blázquez-Cuesta and Salverda (2009).
Note that data are pooled over the 1995-2001 period to arrive at a sufficient number of observations of year-on-year transitions. This comes at a cost of having to disregard any changes over the period. It is often also a period of

However, there are some important inter-country differences in the quantitative importance of these effects. Women clearly suffer less relative to men in Denmark than elsewhere. At the same time the age effect is strongest in Denmark, followed by the Netherlands and France. The educational effect is strongest in the Netherlands[6]. The occupational and industry effects are strongest in the UK. Unfortunately, occupational effects for the US are not comparable to Europe. The impact of having been employed in a low-paid job in the previous year is strongest in the Netherlands and the UK.

Other characteristics are not universally significant in the multivariate analysis or are not working in the same direction in all countries. Temporary contracts significantly increase the probability of being low-paid in France, the Netherlands and the UK while part-time employment does so in the Netherlands, the UK, the US and Germany. Seniority of more than five years with current employer significantly lowers the risk of being low paid in France and Germany but not in the UK, Netherlands or Denmark.

Further inter-country differences emerge in descriptive statistics derived from the European Community Household Panel (ECHP) and the US Current Population Survey (CPS). For example, the incidence of low-wage employment in the 15-24 age group is highest in the Netherlands for both young men and women and lowest in the UK for young women and in the US for young men (Table 2.2, Panel A). However, it is only in Denmark that young people make up the majority of the low paid (Panel B). In terms of education levels, the incidence of low pay is highest for workers educated to primary level in all countries (Panel A) but primary-educated workers only represent a majority of low-paid workers in Denmark. In the other countries a majority of low-paid workers are educated at least to secondary level (Panel B).

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favorable job growth. For Europe the ECHP dataset was used, for the US the PSID dataset. See footnote 11 for a caveat and further explanation.

We are grateful to Maite Blázquez for her work on the model and on the European Community Household Panel (ECHP) and to Daniella Brals for her work on the US Panel Study of Income Dynamics (PSID).

[6] It is small in France but they may relate to problems of the French educational variable after 1997.

Table 2.2: Low pay by personal characteristics, 2001
Percentage of national low-wage incidence

	Denmark	France	Germany	Nether-lands	United Kingdom	United States
A. Incidence	***Low-paid as percentage of all employees in category***					
Total	12	15	23	23	22	24
Young women *	56	57	68	75	54	61
Young men *	68	56	71	75	44	51
Adult women *	7	17	26	22	26	21
Adult men *	3	8	10	8	8	12
Primary education**	38	19	48	48	33	60
Secondary education	9		21	27	26	25
Tertiary education	2	8	10	11	13	6
Nationals	12	15	23	23	22	22
Other EU	24	15	28	23	19	33
Non-EU or unknown***	36	23	25	33		
B. Composition	***Percentage of all employees in low-wage employment***					
Total	100	100	100	100	22	24
Young women *	25	12	17	22	54	61
Young men *	37	18	18	22	44	51
Adult women *	24	46	43	37	26	21
Adult men *	13	24	22	18	8	12
Primary education**	56	84	37	9	33	60
Secondary education	40		52	75	26	25
Tertiary education	4	16	10	16	13	6
Nationals	97	96	91	99	22	22
Other EU	1	2	3	0	19	33
Non-EU or unknown***	2	2	5	1		
C. Concentration	***Incidence of low pay among category as percentage of overall incidence***					
Total	100	100	100	100	100	100
Young women *	474	369	296	331	247	258
Young men *	576	366	305	332	198	216
Adult women *	57	108	111	100	119	96
Adult men *	28	49	44	37	36	51
Primary education**	325	123*	204	213	151	254
Secondary education	77		90	118	120	105
Tertiary education	14	51	44	50	59	27
Nationals	98	100	99	100	100	94
Other EU	206	96	125	101	88	141
Non-EU or unknown***	303	148	107	146		

Notes: all employees, including apprentices and those working <15 hours per week. See Table A2 for more detail.
*) Young men and women aged 15-24; Adult men and women aged 25-64.
**) Educational level was imperfectly observed for France. Similar data for 1995 indicate higher incidence of low pay among the least educated as in other countries.
***) foreign-born for the US.
Sources: Analysis of ECHP and CPS, see Mason and Salverda (2008

Immigrant status also increases the probability of being low-paid in most countries. Low pay tends to affect non-EU immigrants disproportionately in all the European countries except for the UK where many immigrants are better-educated than the majority of local workers. In the US the share of immigrants among the low-paid (19%) is much higher than in any of the European countries (Panel B), in part because of higher employment participation among immigrants in the US.[7]

Among adult workers the concentration of low pay – defined as the low-wage share within a category relative to the low-wage share for the economy as a whole – is highest for women in the UK and men in the US (Table 2.2, Panel C). For primary-educated workers, the concentration of low pay is highest in Denmark and the US while for secondary-educated workers it is highest in the UK. Although the concentration of low pay for tertiary-educated workers is relatively low in all countries, some well-educated and skilled workers account for non-negligible proportions of the low paid in all six countries (see Chapter 4).[8]

For the workforce as a whole, employment as a proportion of population is highest in Denmark (76% in 2005) and lowest in France (62%) and Germany (66%) (see Chapter 1, Table 2). These inter-country differences in employment rates primarily concern young workers (aged 15-24) and older workers (aged 55-64). For example, youth employment rates are much lower in France and Germany than in the other four countries, as are employment rates for older men. Among older women employment rates in France and Germany are also well below the US, Denmark and the UK but are slightly above the Netherlands. In the prime-age category (25-54), there are few differences between countries in employment rates for men but employment rates for prime-age women range from 80% in Denmark to 71% in Germany.

Figure 2.3 relates important cross-national demographic differences in employment participation by age and gender to the incidence of low pay, distinguishing full-time low-paid workers from part-timers. Looking first at the 15-24 age group, the very low incidence of low-paid youth in France is partly reflects the relatively low youth employment rate in that country. By contrast, high youth employment rates in Denmark and the Netherlands are strongly associated with low pay, and particularly so for part-time jobs in the Netherlands where low-paid part-time work accounts for roughly half of all youth employment. Students (including apprentices[9]) seem to be playing the most important role in Denmark, the Netherlands and Germany, especially for part-time jobs of 15 hours per week or less (Appendix Table A3). Clearly, the overlap between education and paid work is much less in France than in the other five countries. The relatively high proportions of low-paid full-time jobs among young men in Denmark and Germany partly reflect the prevalence of apprenticeship training in those two countries.

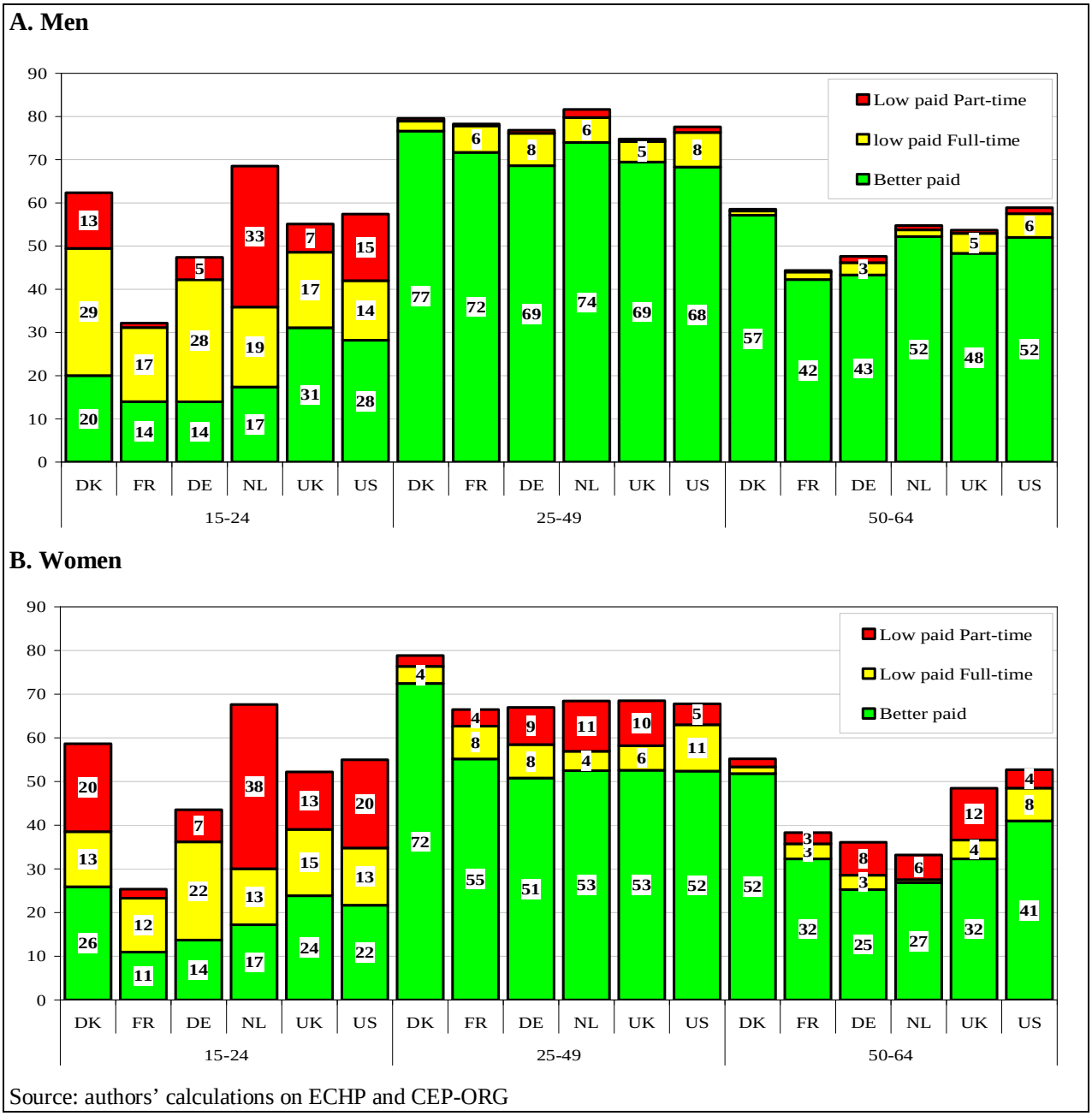
[7] It is important to take into account that 'foreign-born' is a broader definition than foreign nationality. The population share of the former is twice that of the latter for the US (12.8 against 6.6%, more so than in the five European countries on average: 9.9 against 5.7%). At half the level of 19% the US immigrant share of low pay would still top all European countries. See OECD, *International Migration Outlook 2006*, Chart I.4.

[8] For further details of the concentration of low-wage employment analyzed by working hours, seniority, type of contract and occupation, see Appendix Table A2.

[9] The variable lumps both together; the numbers for 35 hours or more may be indicative of the role of apprentices, those below 35 hours for students in full-time education.

Figure 2.3 Employment rates by level of pay and working hours, 2001

Percentage of population by age and gender



Source: authors' calculations on ECHP and CEP-ORG

For men aged 25-49 years there are few differences in the proportions in low-paid part-time jobs between five of the six countries. Denmark is the exception for its low share of low-paid employment in both part-time and full-time jobs. Denmark stands out even more clearly for its relatively low incidence of low pay among women aged 25-49. By contrast, there are relatively high proportions of low-paid part-time jobs among women aged 25-49 in the Netherlands, UK and Germany and among full-time women in this age

bracket in the US.[10] Turning to workers aged 50-64, the incidence of low pay is lower than among workers aged 25-49 in all countries except for the UK, where older women are at comparatively high risk of low pay.

3 Sectoral distribution of low pay

As noted above, persons working in the trade[11], hotels and catering industries run a higher risk of low pay in all countries, and to these can be added the agriculture and personal services industries (Appendix Table A4). These industries also have the lowest levels of average pay within each of the national economies.[12] In all countries hotels and catering lead the pack in terms of the concentration of low pay, but always with the proviso that the overall incidence of low pay is lower in Denmark and France than the other four countries. In most of these low-paying sectors the concentration ratio in the US is similar to that in the EU countries but agriculture is an exception with a much higher concentration of low pay in the US.

A shift-share decomposition of the gaps in low-pay incidence between each of the five European countries and the US enables us to isolate the effect of inter-country differences in sectoral structure (Appendix Table A5). Some interesting conclusions can be drawn. First, the generally lower incidence of low pay within industries in Denmark and France is the main driver of the large differences in low-paid employment shares between those countries and the US. Second, the lower incidence of low pay in Germany, Netherlands and UK relative to the US appears to be due to differences in sectoral structure (lower shares of employment in low-paying industries). However, these effects of differences in sectoral structure are diminished when hours of work are accounted for as compared to headcounts of employees.

4 Chances of escaping from low pay

Earnings mobility was researched in different ways in the national monographs. The main results were relatively high mobility rates out of low-pay for Denmark, where many low-paid workers are young, and France, especially for those with intermediate or higher educational qualifications. In Germany, the Netherlands, the UK and the US mobility seems more limited with a risk of cycling between low pay and no pay.

For the present comparison we adopted a uniform approach which builds on the above analysis of the risks of being low paid, taking into account the whole range of problems usually troubling the analysis of mobility: selection bias, initial conditions, panel attrition (which plausibly non-randomly affects the low paid more) and genuine state dependence. This is well suited to analyzing the effects of a low-pay-no-pay cycle.

Table 2.3 presents the results based on data covering the period from the mid-1990s to the year 2001 included from the European Community Household Panel (ECHP) for the European countries and the Panel Study of Income Dynamics (PSID) for the US[13]. These largely support the results found in the

[10] See Appendix Table A3 for further details of the concentration of low pay by part-time/full-time status and other job characteristics.

[11] Within the trade sector, this primarily concerns retail trade as can be shown from other sources than ECHP which, unfortunately, does not allow disaggregation between retail and wholesale activities.

[12] Source: EU-KLEMS compensation of employees per hour.

[13] To mimic ECHP as much as possible PSID was used – the Cornell University Cross-National Equivalent File CNEF. Unfortunately, important differences remain: PSID is not available for 1998 and 2000 and as a result the transitions observed for 1999 and 2001 are two-year instead of one-year as for the other years and ECHP. Evidently, this may upwardly affect transition rates – this is an important caveat to be kept in mind. Hourly wages for PSID are defined on annual hours and earnings over the preceding year instead of usual monthly earnings and weekly hours as for ECHP. Part-time employment, though identically defined as less than 35 hours a week, is also derived from these

European monographs which were based on national data sources, but they enable a more precise comparison. The results for the US are a new contribution. Generally speaking, and perhaps a bit surprising though we found that before, they largely fit the range of European result. Clearly, the risk of remaining in low pay is less for Denmark and France (below 0.5) than for the other European countries (around 0.6) with the US in between (Row 1). In Denmark and France low-paid workers also have a higher chance of moving towards better pay but, much more surprisingly, they also face a higher risk of shifting out of waged employment – particularly in Denmark (0.229) (Row 7). The highest chances of moving upward from low pay are found for the US, which is an unexpected result (but note the caveat mentioned in footnote 11), but notably also the highest chances of falling back from better pay. At the same time, the US have the lowest outflow from low pay to non-employment, which seems plausible. The chances of remaining in non-employment are rather similar across all European countries at about 0.8 and only slightly less for the US.

Table 2.3: Predicted transition rates between low-wage and better-wage employment and non-employment, 1995-2001

Transition	Total	Fe-males	Part-timers	Total	Fe-males	Part-timers	Total	Fe-males	Part-timers
From > To	**Denmark**			**France**			**Germany**		
Low pay > low pay	0.487	0.502	0.484	0.492	0.505	0.492	0.601	0.615	0.592
Better pay > low pay	0.030	0.035	0.081	0.048	0.055	0.054	0.035	0.048	0.051
Low pay > better pay	0.294	0.265	0.227	0.344	0.289	0.227	0.256	0.220	0.227
Not employed > low pay	0.080	0.081		0.068	0.060		0.102	0.099	
Not employed > better pay	0.214	0.203		0.109	0.092		0.122	0.106	
Not employed > not employed	0.800	0.788		0.872	0.887		0.842	0.851	
Low pay > not employed	0.229	0.248	0.295	0.171	0.213	0.227	0.145	0.168	0.185
Better pay > not employed	0.083	0.099	0.115	0.082	0.101	0.102	0.070	0.086	0.094
	Netherlands			**United Kingdom**			**United States**		
Low pay > low pay	0.618	0.623	0.638	0.580	0.605	0.626	0.529	0.565	0.555
Better pay > low pay	0.042	0.060	0.071	0.061	0.083	0.122	0.077	0.101	0.098
Low pay > better pay	0.250	0.215	0.200	0.276	0.231	0.196	0.393	0.354	0.368
Not employed > low pay	0.137	0.120		0.112	0.117		0.107	0.119	
Not employed > better pay	0.129	0.113		0.166	0.137		0.219	0.181	
Not employed > not employed	0.829	0.841		0.791	0.800		0.738	0.752	
Low pay > not employed	0.136	0.166	0.164	0.148	0.169	0.180	0.079	0.082	0.079
Better pay > not employed	0.055	0.070	0.077	0.069	0.083	0.094	0.049	0.059	0.053

Notes: data pooled over the period; all employees including those working <15 hrs per week except for France (where employees working <15 hours per week represented 0.4% of all employees in 2001); the 'not employed' category comprises self-employment, unemployment and inactivity.

Sources: analyses of ECHP as reported in Blázquez and Salverda (2008) and authors' estimations on PSID.

annual hours (in combination with the part-time variable). Finally, PSID includes the self-employed – which, compared to Europe, will lower transitions to non-employment which for ECHP analysis comprises self-employment; it may also increase earnings volatility – and has a different classification of occupations.

The table also specifies the risks for women. In all countries they are worse off compared to men, having higher chances than average of remaining in an unfavorable situation or falling back to this (Rows 1, 2, 7, 8 and 9) and lower chances of accessing a more favorable position (Row 3, 5). Only their chance of moving from non-employment to a low-wage job (Row 4) is smaller. Though gender differences for remaining in low-wage employment are small, though less so in the US than in Europe, they seem more substantial for exiting to non-employment or up the earnings ladder.

The prospects of mobility for part-time workers are also presented separately. At first sight and positively, they seem less prone to remaining in low pay. However, behind this is a substantially higher risk of leaving to non-employment – except for the US – and also a lower chance of moving to higher earnings. Equally, part-timers generally run a greater risk of falling back from better pay to low pay (particularly in the UK and the US), or leaving better pay for non-employment (notably in Denmark). Compared to women, part-timers are often, but certainly not always, slightly worse off.

5 Low pay and living standards

What does being low paid mean in terms of living standards in these different countries? In this section we first consider a common measure of average living standards across the population as a whole and then present estimates of the purchasing power of wages at the low-pay thresholds in each country in terms of both gross pay and net (take-home) pay. In the next section, we go on to consider inter-country differences in non-wage benefits financed by the state or employers which also contribute to the living standards of low-wage workers (for example, health care and pension benefits).

Recent OECD estimates based on PPP (purchasing power parity) exchange rates indicate that average GDP (gross domestic product) per head of population in the United States is about 20–40% higher than in the five European countries (Table 2.4, Row 4). Compared to Denmark, Germany and the UK, the US advantage in GDP per capita derives from both higher average labour productivity per hour worked (Row 1) and higher average annual hours worked per person in employment (Row 3). However, in two European countries (the Netherlands and France) productivity is much the same as in the US and the US lead in GDP per capita over these two countries derives solely from longer hours worked relative to both countries as well as a higher employment/total population ratio relative to France (Rows 2 and 3).

Table 2.4: Measures of labor productivity, living standards and average labor costs

		Denmark	France	Germany	Nether-lands	United Kingdom	United States
	A. Productivity and living standards: PPP exchange rates: whole economy and population, 2006						
1	GDP per hour worked (USA=100)	85	99	93	102	82	100
2	Employment/population ratio – all ages (USA=100) (a)	108	83	99	106	99	100
3	Average annual hours worked per person in employment (USA=100)	87	87	80	77	92	100
4	GDP per head of population (USA=100)	80	71	73	83	75	100
	B. Purchasing power at low pay thresholds: PPP exchange rates						
	Year	(2005)	(2005)	(2004)	(2005)	(2005)	(2003-5)
5	Low pay threshold in USD at PPP exchange rates (USA=100) -- gross hourly wages (b)	125	83	105/77(c)	112	94	100
6	Low pay threshold in USD at PPP exchange rates (USA=100) -- est. hourly wages net of taxes and employee social contributions (d)	94	78	83/60(c)	96	93	100
	C. Average labour costs at low pay thresholds: current exchange rates						
7	Est. labour costs at low pay threshold in USD at current exchange rates (USA=100) -- gross hourly wages (e)	190	97	119/86(c)	127	113	100
8	Est. labour costs at low pay threshold in USD at current exchange rates (USA=100) -- gross hourly wages plus payroll taxes and employers' social contributions (f)	177	127	133/96(c)	137	114	100

Notes:
(a): Note that this refers to employment/population ratios for the entire population, not just the 15-64 year old population of working age.
(b) PPP exchange rates for private consumption, domestic currencies (US$=1.00): Denmark 9.09, France 0.94, Germany 0.91, Netherlands 0.91, UK 0.66.
(c): Refers to West and East Germany respectively
(d): Based on average tax rates at 67% of average wage for full-time workers, including employee social contributions in 2000 (Source: Immervoll, 2007; see Appendix Table A6)
(e) Market exchange rates, domestic currencies (US$=1.00): Denmark 6.00, France 0.80, Germany 0.81, Netherlands 0.80, UK 0.55.
(f): Based on average payroll tax rates and employer contributions for full-time employees earning 67% of average wage, 2000 (Source: Immervoll, 2007; see Appendix Table A6)
Sources:
Rows 1-3: OECD, http://stats.oecd.org/WBOS/Default.aspx?DatasetCode=DECOMP
Rows 4 and 6: Derived from national labour force surveys in European countries (as reported in national monographs) and Current Population Survey in the United States)
Exchange rates: OECD, http://stats.oecd.org/wbos/Index.aspx?datasetcode=SNA_TABLE4

In order to compare the purchasing power of take-home hourly pay at low-pay threshold levels in each country, we convert the thresholds to a common currency and make rough adjustments for taxes and employees' social contributions to derive estimates of net hourly wages in each case (Row 6). The results

show that, in spite of the US lead in average living standards for the population as a whole, the estimated purchasing power of take-home hourly pay at low-pay threshold levels in the Netherlands is only 4% lower than in the US, and in Denmark and the UK this purchasing power is, respectively, only 6% and 7% lower than in the US. In other words, the estimated purchasing power of net hourly wages at the 9th percentile of the wage distribution in Denmark, where the low-pay threshold is situated, is only 6% lower than that of net hourly wages at the 25th percentile of the US wage distribution which corresponds with the low-pay threshold.

This narrowing of inter-country differentials in purchasing power at low wage levels – as compared to the differences in average living standards measured by GDP per capita – reflects the higher degree of compression in income distributions in the European countries relative to the US (Figure 2.2). It is only in France and Germany that the purchasing power of net wages at the low pay threshold is appreciably lower than in the US – partly due to relatively high employee social contributions in both countries[14] and, in the case of Germany, the impact of reunification.

Conversely, when we compare low-pay threshold pay rates in terms of labor costs to employers, taking account of inter-country differences in payroll taxes and employer social contributions, then the levels in all the European countries (and especially in Denmark) are well above that in the US (Table 2.4, Row 8). One implication of this comparison is that employers in the European countries may be under greater pressure than employers in the US to economize on the use of low-paid workers and to find ways of raising their productivity (for example, through upskilling and more capital-intensive forms of work organization).

6 Working and living conditions for low-paid workers

Though wage earnings are at the core of the employment relationship and define low pay, there are other important conditions that contribute to job quality and/or living standards for the low paid as for any other worker. These conditions can be offered by individual firms to their workers on the basis of rules and regulations[15] or by society at large. It is when we turn to consider many such working and living conditions associated with low-wage employment in these economies, that important differences between Europe and the US do emerge. To assess these contrasts we take into account the "social wage": the non-wage benefits and entitlements directly provided by employers and those funded primarily by general taxation or, in some countries, by employers' and employees' contributions. After this discussion, Section 2.7 compares the six countries on the extent to which low-wage employment overlaps with household poverty.

Over recent decades European Union Directives on matters relating to work conditions have ensured that – on a number of key dimensions of work conditions such as annual leave, sickness leave and the entitlements of part-time and temporary workers – the five European countries have a lot more in common with each other than they do with the US. In addition, some elements of the social wage such as affordable health care are generally more available to European than US workers. However, in respect of other work conditions such as working time and job security, there are differences between European countries – in enforcement as well as in the letter of regulations – and some of them resemble the US in some ways. The same is true of other elements of the social wage such as private pension entitlements which tend to be

[14] Note that the impact of employee social contributions on workers' standard of living is not straightforward. Employee (and employer) contributions, which largely go towards health-care coverage and pensions, are not simply reductions in earnings received by workers, but may also reasonably be viewed as part of workers' current or deferred compensation. See the discussion of the "social wage" below.

[15] Or, naturally, voluntarily. We leave that category aside here for lack of systematic data.

less available to low-paid workers than better-paid workers in some European countries as is the case in the US.

6.1 Annual leave

Partly as a result of statutory minimum annual leave entitlements set out in European working-time regulations, workers in all five European countries (including low-paid workers) enjoy substantially longer average periods of annual leave than do their US counterparts (Appendix Table A7). The US is distinctive in having no statutory minimum annual leave entitlement at all. In fact, many US employers do offer paid vacations and public holidays to some employees but low-wage workers and those working part-time and/or in small establishments tend to receive comparatively small amounts of paid leave or none at all (Ray and Schmitt, 2007). Overall, about 23% of all private sector workers in the US do not receive any paid vacation or paid public holidays.

6.2 Sickness leave

There are also clear European-US differences in the availability of paid leave for sickness which is an important consideration for workers in low-paid occupations which have an above-average risk of on-the-job health hazards such as repetitive arm or hand movements, working in tiring or painful positions or being required to carry or move heavy loads (EFILWC, 2005; Krauser et al, 2005).

In all five European countries employees are guaranteed cash sickness benefits for short- or long-term illness. In France and Germany provision is organized through social insurance funds to which both employers and employees contribute. In Denmark and the UK sickness leave is based on a combination of statutory requirements on employers and tax-funded benefits (SSA, 2007). (Where individuals do not qualify for mandatory sickness pay due to limited prior employment history or similar reasons, they are typically eligible for state-funded benefits). In the Netherlands firms are obliged to meet statutory requirements for which they can take out private insurance. These minimum levels of provision are then enhanced in each European country in varying degrees through employer-specific sick pay schemes, which may be based on collective labor agreements.

Even though these European employer-specific schemes tend to provide less generous sick pay arrangements for low-skilled workers whose bargaining power is limited, the minimum levels of guaranteed sick pay provision ensure that low-paid European workers are better off than the great majority of their counterparts in the US. Lovell's (2004) analysis of 1996-98 Employee Benefits Surveys shows that 48% of all US workers (39% of full-timers, 84% of part-timers) had no paid sick-leave entitlement at all. This proportion increased to 77% for those in the bottom wage quartile.

In a study of nine European countries and Canada, Ercolani, Barmby and Treble (2002) found that there was no clear link between rates of sickness absence and the generosity of statutory sickness benefits across countries. In most of these countries the highest rates of sickness absence were found, as expected, among low-skilled occupations with the highest exposure to health hazards. Although women tended to have higher rates of sickness absence than men, these gender differences were largely explained by differences in age distribution together with marital status. It seems likely that the higher absence rates for married women reflected their greater domestic responsibilities outside the workplace, an indication of the importance of paid sickness leave provision for workers in female-dominated low-paid occupations.

6.3 Entitlements of part-time and temporary workers

All five European countries have implemented European Commission directives designed to ensure that pay and conditions for part-time employees are not less favorable than for comparable full-time employees (see Chapter 3 for further discussion). Thus, for example, employers are typically required to treat part-time employees in the same way as comparable full-timers in respect of:

- hourly rates of pay
- access to company pension schemes

- entitlements to annual leave and maternity/parental leave on a pro rata basis
- entitlement to contractual sick pay, and
- access to training.

These legal requirements have no parallel in the US. However, the incidence of part-time working is relatively low in the US compared to the five European countries. A similar disparity exists in the case of temporary (i.e., fixed-term contract) workers who, in Europe, are covered by a European Commission directive designed to ensure parity with permanent workers employed by the same firm. Again, there is no parallel for this requirement in the US but, as will be shown below, the US also has a relatively small proportion of temporary employees – in common with other countries where protection for permanent workers is itself relatively weak (OECD, 2004).

6.4 Working time

In 2004 average annual hours worked per person engaged (employees and self-employed) in the US were about 9% higher than in the UK and some 25–34% higher than in Denmark, France, the Netherlands or Germany (Appendix Table A8, Column 3). These differences have widened since the mid-1970s onwards as France, Germany, Denmark and the Netherlands have all shown a marked decline in average working hours relative to the UK and US (partly reflecting strong union pressure in the Continental countries). Differences in average working time are associated with different rates of part-time employment (especially for women) and different degrees of 'long-hours working' as well as differences in standard daily working time in each country. A measure of 'usual weekly hours of work most frequently reported' for male employees in 2002 shows them to be lowest in France and Denmark out of the six countries (Appendix Table A8, Columns 4–7).

One institutional reason underlying the lesser degree of long hours working in the Continental European countries is the European Commission's 1993 Working Time Directive which limited working time to a maximum of 48 hours per week over a 17 week reference period. The UK is distinctive for having secured an opt-out from this legislation which allows UK workers to agree not to be subject to the 48 hour limit. Barnard *et al*. (2004) report substantial use of the opt-out in sectors such as health care, hotels and catering and manufacturing, and a 2001 survey found that an estimated 13% of all UK employees 'usually' worked more than 48 hours per week (BMRB 2001). This degree of long-hours working in the UK is not dissimilar from the US where some 9% of male employees reported usually working 50-54 hours per week in 2002 (Appendix Table A8, Columns 7–8).

Another job quality indicator of interest concerns 'involuntary part-time work' defined as comprising three groups: i) individuals who usually work full-time but who are working part-time because of economic slack; ii) individuals who usually work part-time but are working fewer hours in their part-time jobs because of economic slack; and iii) those working part-time because full-time work could not be found[16]. Here there seems to be a marked contrast between the UK and the Netherlands where involuntary part-time employment rates are relatively low in spite of high part-time rates as a whole, and other countries where involuntary part-time employment is relatively high such as Germany, Denmark and especially France (Appendix Table A9, Columns 6–8).

6.5 Job security

OECD measures of labor market regulation suggest that employment protection is considerably weaker in the US, UK and Denmark than in France, Germany or the Netherlands. In the case of the UK and Denmark this is reflected in lower average job tenure figures than are found in France, Germany or the Netherlands (Appendix Table A9, Columns 1–2). Equivalent data for the US are not readily available but

[16] Note that it is not asked whether people would have liked to work longer hours as such even if part-time.

it would be surprising if they were not closer to Denmark and the UK than the other three countries. Note, however, that UK and US workers do not enjoy the degree of 'protected mobility' found in Denmark where low employment protection is supported by a generous income replacement system that subsidizes temporary lay-offs by employers and offers training to the unemployed.

That said, if we look at other indicators of job quality and security, relatively low employment protection (as found in the UK and US) is associated with comparatively low levels of temporary employment in those two countries (Appendix Table A9, Columns 3–5). This is in line with OECD analysis which suggests that employers have fewer incentives to offer fixed-term contracts in countries such as the UK and US where employment protection for workers on permanent contracts is relatively weak (see OECD, 2004, and Chapter 3 of this volume)[17].

6.6 Pension entitlements

Pension entitlements are generally regarded as part of the 'social wage'. In all six countries they derive in part from occupational (employer-based) and/or personal (individual-based) pension schemes as well as from public sector schemes. In each country mandatory pensions comprise a mix of 'first tier' universal benefits and 'second tier' benefits derived from social insurance schemes of different kinds (Appendix Table A10, Columns 1–2). Estimates of gross replacement rates from these mandatory pensions (that is, gross pension entitlements as a proportion of gross pre-retirement earnings[18]) show that the average drop in income post-retirement for those relying on mandatory pensions is much lower in Denmark and the Netherlands than in the other four countries (Appendix Table A10, Column 3).[19]

In France, Germany, the UK and the US, all mandatory second tier pensions are public sector-based. By contrast, Denmark's second tier provision is based on private but mandatory personal pensions and quasi-mandatory occupational pensions while Dutch second-tier provision is based on quasi-mandatory occupational schemes which can be provided collectively or privately. The upshot is that 90%-plus of the Danish and Dutch workforces are covered by such pensions whereas in the other four countries all private pension schemes are voluntary and cover only 18% of the workforce in France, 51% in the UK, 56% in the US and 63% in Germany. In general, the workers excluded from private occupational schemes and/or not participating in private personal schemes in these four countries are likely to be lower-paid employees (OECD, 2006). Hence, low-paid workers in these countries tend to be dependent on mandatory pension schemes and suffer sharp drops in income post-retirement. For workers earning 50% of average earnings in each country, these drops in income are only slightly cushioned by the workings of tax and benefits systems in France, Germany, the UK and US (Appendix Table A11, Column 5).

6.7 Health care

Another key element of the social wage affecting comparisons of the living standards of low-pay workers in each country is access to public services such as health care. In France and Germany the bulk of public health funding comes from taxes and compulsory social health insurance contributions from employers and employees. Users make only modest contributions to the costs of services, and there are some exemptions for low income persons (NAO, 2003). In the UK the National Health Service is largely funded out of general taxation and is free at the point of delivery (ibid). In Denmark health services are financed partly through local taxation and partly through block grants from central government. The great majority of health services are free of charge for users.[20] In the Netherlands there is a mandatory private health insurance system which is funded by direct contributions which are capped, income-related individual

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[17] Note, however, that patterns of temporary employment across industries are much the same.

[18] In the letter or regulations not necessarily in actual practice.

[19] Note that "Unfortunately, data on coverage of private pensions can be extremely difficult to obtain and is often difficult to compare because of institutional differences in the markets for long-term savings. … and the estimates shown should be regarded as preliminary."(OECD, 2007, 77).

[20] http://www.im.dk/publikationer/healthcare_in_dk/all.htm#c2.

contributions to the tax authorities up to a certain income threshold and by employers' contributions (which are taxed as income for employees). Private insurers are obliged to accept every resident in the areas in which they operate for a statutory package of provisions.[21]

By contrast, US healthcare is predominantly funded on a 'voluntary' (i.e., market-driven) basis by private sources with some provision for the very poor through Medicare (NAO, 2003). One outcome is that private health insurance coverage is positively associated with income in the US. For example, in 2004 only 24% of workers in the lower wage quintile were covered by private-sector employer-funded health insurance compared to 46% in the second wage quintile and 62-78% in the third to fifth wage quintiles (Mishel, Bernstein and Allegretto, 2007, Table 3.12).[22] Thus we conclude that low-paid workers in the US are much less likely than their European counterparts to be able to gain access to affordable healthcare (unless for some reason they qualify for Medicare).

7 Low pay and household poverty

The relative absence of welfare state provision in the US also contributes to a greater overlap between low pay and household poverty than is found in Europe – which may be considered as another important indicator of comparative living standards at low pay levels.[23] Recent OECD (2007) analysis applies the same definition of relative poverty internationally (50% of equivalized household income) in comparing the incidence of 'working poor' across countries. The results suggest that the proportion of the population in poor households containing at least one worker was 13% in the US in 2001, about 5 percentage points (pp) higher than in the Netherlands and about 8-10 pp above Denmark, France, Germany and the UK (Table 2.5, Columns 1–3). If we look at the proportion of the population in poor households of all kinds, then the US is also highest at 17% compared to 5–11% in the European countries (Columns 4–5). In general, household poverty in Europe is more likely to involve jobless households than it is in the US.

Table 2.5: Proportion of the population in poor* households, 1984–2001

	With at least one worker**			All households	
	1987**	1994	2001****	1994	2001
Denmark	..	1.9	2.6	3.8	5.3
France	1.1	3.4	2.8	7.5	7.0
Germany	4.0	3.3	4.3	9.4	9.8
Netherlands	2.8	4.1	8.5	6.4	7.9
United Kingdom	6.9	3.5	4.7	10.5	10.7
United States	10.0	9.7	13.2	18.4	16.9

*) With income below 50 per cent of the current median household income
**) No minimum of hours and months worked in previous year.
***) France and Germany 1984; UK and US 1986.
****) UK 1999, Netherlands and US 2000
Source: OECD Employment Outlook, 2006 (Statistical data underlying Figures 2.9 and 2.10).

8 Low pay, employment and unemployment

Finally, we consider another important aspect of living standards at the bottom end of the labor market, namely, the opportunities in each country for would-be workers to avoid unemployment or inactivity. It is often postulated that the level of employment and its growth may be hampered by restrictions on the

[21] http://www.minvws.nl/themes/health-insurance-system/default.asp.
[22] Refers to private-sector wage and salary workers age 18-64 who work at least 20 hours per week and 26 hours per year.
[23] For a fuller treatment of this topic, see Nolan and Marx (2009).

possibilities for employers of paying low wages. As a result firms may be unable to maintain or create low-productivity jobs, and low-educated individuals may not find work. The implication seems to be that a higher rate of employment may bring in individuals and jobs at the low margin of productivity, and that a higher incidence of low pay may indicate a more important role for low-productivity work.

A number of research studies since the 1980s have pointed to 'labor market rigidities' – for example, employment protection legislation, long-duration unemployment benefits and certain kinds of collective bargaining – as key factors contributing to relatively high rates of growth in and persistence of unemployment in Continental European economies such as France, Germany, Spain and Italy (Nickell, 1997; Blanchard and Wolfers, 2000).[24] Since institutions of this kind often help strengthen the bargaining power of workers at the bottom end of the labor market, a general proposition has emerged that there is a potential trade-off between employment and equity objectives in many countries).

At first glance, the particular group of countries investigated in this book provide scant support for this proposition. For example, Denmark and the Netherlands have extensive labor market regulation and low (or relatively low) levels of low-wage work and yet have employment rates as high or higher than in the US or UK, which have far less regulated labor markets and much higher rates of low-wage employment (see Table 2.6). Recent OECD analysis (based on data for 20 industrialized countries, including the six countries under consideration here) has examined this issue and found there to be "no systematic relationship [across countries] between changes in unemployment rates since 1994 and changes in low-pay incidence" (OECD, 2006: 175). In addition, turning to evidence on levels rather than changes, this same analysis found measures of income inequality to be negatively correlated with labor force participation and employment rates and positively correlated with unemployment rates (ibid: 165).[25]

However, these findings are based on univariate analysis alone and they also do not preclude the possibility that, in at least some national-institutional settings, some kind of trade-off between employment rates and income inequality may exist. For example, the high unemployment rate in France compared to the UK in recent years is mirrored by a much lower incidence of low pay in France compared to the UK. While French unemployment is often attributed in part to the specific workings of French labor market institutions, the UK's relative success in reducing unemployment in recent years and in achieving high rates of employment among groups such as women, youth and older people has been attributed in part to working tax credits and other policies which have encouraged more low-skilled people to enter low-paid employment (Mason, Mayhew and Osborne, 2008).

[24] See Blanchard, 2006, for a recent survey of literature in this area. For econometric critiques of Nickell (1997) and other articles representative of this literature, see Howell, Baker, Glyn and Schmitt (2007) and Baccaro and Rei (2005).

[25] The measure of low-pay in OECD (2006) is the proportion of full-time wage-earners earning less than two thirds of the median wage of full-time wage-earners. The measures of income inequality referred to are Gini coefficients and 9th/1st wage decile ratios.

Table 2: Employment rates, 2005
(percent of population)

	Denmark	France	Germany	Netherlands	United Kingdom	United States
(a) Age 15-64						
All	75.5	62.3	65.5	71.1	72.6	71.5
Women	70.8	56.9	59.6	64.8	66.7	65.6
Men	80.1	67.8	71.4	77.4	78.8	77.6
(b) Age 25-54						
All	83.9	79.6	77.4	80.9	81.1	79.3
Women	80.0	72.7	71.0	74.0	74.7	72.0
Men	87.7	86.6	83.7	87.6	87.7	86.9
(c) Age 15-24						
All	62.0	26.0	42.6	61.9	58.6	53.9
Women	57.6	22.6	40.1	61.5	56.7	52.6
Men	66.3	29.3	44.9	62.3	60.4	55.2
(d) Age 55-64						
All	59.8	40.7	45.5	44.9	56.7	60.8
Women	52.9	37.6	37.6	34.5	48.1	55.1
Men	66.8	43.8	53.6	55.1	65.7	67.0
(e) Age 25-64						
Less than upper secondary education	60.4	57.8	51.6	59.5	52.1	57.2
Upper secondary education	79.7	75.0	70.6	77.9	79.6	72.8
Tertiary education	86.4	81.6	82.9	85.6	87.9	82.5

Notes: OECD, *OECD Employment Outlook 2007*, Tables B, C, and D.

Various multivariate analyses have shed further light on a possible trade-off between the objective of maximizing employment and the objective of reducing income inequality. The issue at stake is whether particular labor market institutions which help to strengthen worker bargaining power and promote pay compression also tend to discourage employers from offering job opportunities. For example, Bertola, Blau and Kahn (2007)'s analysis of data from 17 OECD countries suggests that, the stronger is the influence of unions in wage-setting procedures, the lower are employment rates for the young and old relative to prime-age workers. They also find union influence to be associated with relatively high unemployment for women. The role of unions is discussed in more detail in chapter 3.

Union density is one of the many policy and institutional variables considered by Bassanini and Duval (2006) who are also able to control for business cycle conditions (using an output gap measure) in their analysis of the determinants of employment rates in OECD countries. [26] They find that union density does have significant negative effects on the employment rates of older workers and part-time prime-age females. They also find that employment rates for all gender and age categories of worker are significantly negatively related to the generosity of unemployment benefits (as measured by average replacement rates) and the 'tax wedge' between the labor cost to employers and the corresponding net take-home pay of employees. These two variables – average replacement rates and the 'tax wedge' – also feature in their analysis as prime determinants of *un*employment rates along with anti-competitive product market regulation. However, union density and the strictness of employment protection legislation have no significant effects on unemployment rates in most of their specifications.

For conclusions regarding a possible trade-off between employment and pay equity objectives, the most important finding presented by Bassanini and Duval (2006) is that employment rate outcomes depend heavily on the *mix* of particular policies and institutions. Thus, for example, generous unemployment benefits may help to strengthen worker bargaining power (by raising the reservation wage of prospective job-seekers) while at the same time their potentially harmful effects on employment rates are offset by high public spending on active labor market policies designed to encourage rapid transitions from unemployment to work. The impact of high tax wedges on unemployment can also be offset to some extent by the workings of 'corporatist' collective bargaining regimes which contribute to moderation in wage growth without necessarily detracting from pay compression (Calmfors and Driffill, 1988). More generally, Bassanini and Duval (2009) observe that the outcomes of the analysis apply to the *average* OECD country – which is unlikely to exists and undoubtedly is not one of our six countries – and warn against "drawing firm conclusions from simple models featuring only a few *ad hoc* interactions."

Thus, in terms of institutional settings, there is clearly more than one way of securing high employment rates and in some countries such as Denmark this objective has been achieved without driving low-wage employment rates up to US and UK levels. Conversely, we may note that employment rates remain relatively low in Germany in spite of the recent growth in low-wage employment in that country.

[26] Note that union density – which is a behavioral outcome – differs from other institutional indicators considered in this analysis such as employment protection legislation which are focused on rules, not behavioral outcomes.

2.9 Summary and assessment

The most important comparative findings can be summarized as follows: First, the incidence of low pay in Germany is found to be surprisingly close to US and UK levels, and major differences seem to occur within Continental Europe – much more than between Europe and the US and the UK. Second, this appears to be based on a differential evolution of the incidence of low pay: it has grown significantly in the UK, Netherlands and Germany during different periods of time over the last 20 years while remaining low in Denmark and falling slightly in France. Notably, the high level of low pay in the US is not a recent phenomenon but can be observed over most of the last three decades. Third, there are many similarities between the six countries in terms of the groups which are most vulnerable to low-wage employment. Fourth, part-time jobs turn out to be important for the international comparison of low-wage employment as their role can be very substantial, thus bearing out the relevance of an hourly definition of low pay. Fifth, not surprisingly, short-time low-paid jobs (less than 15 hours per week) are closely related to the employment rates of youth and thus to aggregate employment rates. Finally, transition patterns between low-paid employment, better-paid employment and non-employment are strikingly similar between Europe and the US (but note the caveats of footnote 11) chances of escaping low pay are better in Denmark, France and the US than elsewhere but still the low-pay-no-pay cycle is an important phenomenon in both these and the other countries.

When we convert low-pay thresholds to a common currency and make rough adjustments for taxes and employees' social contributions to derive estimates of net hourly wages at the low pay threshold in each country, then the estimated purchasing power of take-home hourly pay at low-pay threshold levels in the UK is only 3% lower than in the US, and in the Netherlands and Denmark this purchasing power is, respectively, only 7% and 9% lower than in the US. In other words, the estimated purchasing power of net hourly wages at the 9th percentile of the income distribution in Denmark is only 9% lower than that of net hourly wages at the 25th percentile in the US (since those are the respective shares of low-paid workers in total employment). It is only in France and Germany that the purchasing power of net wages at the low pay threshold is very much lower than in the US – partly due to relatively high employee social contributions in France and Germany (which arguably should be included in the estimates of total compensation since these contributions generally go toward health care and pensions) and the impact of reunification on Germany.

When we compare low-pay threshold pay rates in terms of average labor costs to employers, taking account of inter-country differences in payroll taxes and employer social contributions, then labor costs in all the European countries are well above those in the US. One implication of this comparison is that employers in the European countries may be under greater pressure than employers in the US to economize on the use of low-paid workers and to find ways of raising their productivity (for example, through upskilling and more capital-intensive forms of work organization).

The most important differences between Europe and the US in terms of the working and living conditions associated with low-wage employment emerge when we take into account both non-wage benefits and entitlements which are directly provided by employers, and those which are funded primarily by general taxation or, in some countries, by employers' and employees' contributions.

Over recent decades European Union Directives on matters relating to work conditions have ensured that – on a number of key dimensions of work conditions such as annual leave, sickness leave and the entitlements of part-time and temporary workers – the five European countries have a lot more in common with each other than they do with the US. In addition, some elements of the social wage such as affordable health care are generally more available to European than US workers. And partly as a result of differences in social benefits systems, low pay in the US is more likely to be associated with household poverty than it is in Europe.

However, in respect of work conditions such as working time and job security, there are differences between European countries – in enforcement as well as in the letter of regulations -- and some of them resemble the US in some ways. The same is true of other elements of the social wage such as private pension entitlements which tend to be less available to low-paid workers than better-paid workers in the UK, France and Germany as is the case in the US. However, private pensions have relatively wide coverage in Denmark and the Netherlands (on top of state-funded pensions).

Another important aspect of living standards at the bottom end of the labor market, to consider is the opportunities in each country for would-be workers to avoid unemployment or inactivity. There is evidence that, in some national-institutional settings (though by no means all of them), some kind of trade-off between employment rates and income inequality may exist. For example, trade unions generally help to promote compression in the pay distribution and yet some research suggests that union density has significant negative effects on the employment rates of older workers and part-time prime-age females. However, it is clear that employment rate outcomes depend heavily on the *mix* of particular policies and institutions in each country, not just on particular institutions considered in isolation. In some countries, for example, high union density may coexist with relatively high employment rates if, among other things, there is also high public spending on active labor market policies designed to encourage rapid transitions from unemployment to work.

Overall, we conclude that there is more than one institutional means of encouraging high employment rates and in some countries this objective has been achieved at the same time as maintaining relatively low levels of low-wage employment.

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STATISTICAL APPENDIX

Table A1: Determinants of the probability of being low paid, 15-64, 1995–2001

	Den-mark	France	Ger-many	Nether-lands	United Kingdom	United States*
Female	**0.195**	**0.458**	**0.475**	**0.430**	**0.412**	**0.455**
>=30 & <45 years	**-0.619**	**-0.552**	**-0.308**	**-0.584**	**-0.313**	**-0.259**
>=45 & <65 years	**-0.731**	**-0.422**	0.005	**-0.345**	**-0.186**	**-0.321**
Secondary	**-0.421**	**-0.090**	**-0.364**	**-0.402**	**-0.244**	**-0.339**
Tertiary	**-0.699**	**-0.389**	**-0.665**	**-0.835**	**-0.320**	**-0.620**
Part-time job	-0.030	-0.017	**0.077**	**0.220**	**0.170**	**0.132**
Temporary contract	0.015	**0.348**	0.008	**0.318**	**0.169**	
Seniority ≥ 5 years	-0.045	**-0.223**	**-0.135**	-0.035	0.002	
Legislators, senior officials*	-0.081	-0.090	-0.040	-0.053	**-0.186**	**-0.171**
Professionals	-0.171	**-0.267**	**-0.126**	**-0.150**	**-0.356**	**-0.166**
Technicians and associate	-0.069	**-0.114**	-0.008	**-0.153**	**-0.180**	-0.048
Service, shop and market	**0.450**	**0.455**	**0.307**	**0.283**	**0.529**	**0.321**
Craft and related trades	**0.219**	**0.246**	**0.239**	**0.130**	**0.211**	**0.193**
Plant and machine operators	**0.236**	**0.342**	**0.162**	**0.246**	**0.494**	
Elementary occupations	**0.360**	**0.527**	**0.310**	**0.334**	**0.620**	
Trade, hotels and restaurants	**0.150**	**0.147**	**0.214**	**0.125**	**0.453**	**0.391**
Transport, finance and	0.081	0.015	0.058	**0.098**	0.061	-0.015
Public and personal services	**0.140**	-0.014	0.035	-0.003	0.041	**0.103**
Low pay in previous year	**1.326**	**1.303**	**1.367**	**1.706**	**1.617**	**1.210**
Constant	**-0.313**	**-0.729**	**-0.769**	**-0.575**	**-1.379**	**-1.003**

*) The US occupational classification differs strongly from EU countries; the CNEF classification was aggregated to its first digits, pooling 0 with 1 (because of similarities), and 6 with 9 and 7 with 8 respectively (because of small numbers of observations).

Notes: data pooled over the period; all employees including <15 hrs except for France (0.4% of all employees in 2001); bold values are significant at the 5% level; occupations one-digit ISCO in ECHP and selected likewise in PSID as much as possible; temporary contracts and seniority not available for PSID; on-the-job training included in estimation but not available for France, UK and US.

Reference categories for dummy variables are: aged under 30; primary education; in full-time employment; permanent contract; seniority < 5 years; clerical occupations (administrative for the US); manufacturing, utilities and construction.

Sources: analysis of European Community Household Panel (as reported in Blázquez and Salverda, 2008) and the US Panel Study of Income Dynamics.

Table A2: Concentration of low pay by job characteristics, 2001

Percentage of national low-wage incidence

	Denmark	France	Germany	Nether-lands	United Kingdom	United States
Total	100	100	100	100	100	100
Working hours						
35+ hours	81	94	83	62	69	74
15-35 hours	83	132	121	110	173	224
<15 hours*	514		263	274	234	254
*Seniority on job***						
>2 years	53	60	74	62	78	63
≤ 2years	207	239	193	202	124	159
*Type of contract***						
Permanent	70	77	85	81	96	
Short-term/fixed-term	488	311	26	335	179	n.a.
Casual	416		189	463		
Other	357			214		
Occupations						
Professionals, managers	26	33	51	51	29	32
Clerks	57	88	96	118	99	98
Personal services	164	214	197	181	211	216
Sales persons, sales	384	231	204	236	267	156
Building and craft	214	153	116	111	86	69
Metal workers & operators	117	93	100	106	81	80
Agriculture workers	130	211	194	191	174	216

Notes: all, including working <15 hours per week. *) the smallest jobs are a tiny fraction in France. **) excluding those working <15 hours; US data refer to 2002.

Sources: analysis of ECHP and CPS-ORG and CEPR Tenure Extract from CPS, see Mason and Salverda (2008) for more detail.

Table A3: Students and apprentices, 2005

Percentage among young (age 15-24) workers by length of working week

	Denmark	France	Germany	Nether-lands	United Kingdom	United States*
All hours	64	20	53	60	36	37
<15 hours	96	60	80	94	82	83
15-35 hours	60	37	31	58	55	62
35+ hours	39	16	52	23	15	15

*) 2003-2005

Source: authors' calculations on ELFS and CPS.

Table A4: Low-wage employment by selected job characteristics (%), 2001

	Denmark	France	Germany	Nether-lands	United Kingdom	United States
A. Incidence						
Total	10.3	15.7	21.5	18.1	19.8	22.5
Low-paying occupations						
Personal services workers	24	35	44	37	44	51
Sales persons, sales and services	32	35	42	40	57	37
Building and craft	25	24	27	24	20	16
Agriculture workers & laborers	12	35	41	37	40	51
Low-paying industries						
Agriculture	11	44	50	37	44	51
Trade	19	18	34	29	38	36
Hotels and restaurants	75	42	56	51	63	58
Personal services	16	31	26	33	28	39
B. Concentration						
Total	100	100	100	100	100	100
Low-paying occupations						
Personal services workers	230	219	207	204	223	216
Sales persons, sales and services	314	220	198	218	290	156
Building and craft	242	155	125	131	101	69
Agriculture workers & laborers	115	222	191	202	203	216
Low-paying industries						
Agriculture	105	282	235	151	221	218
Trade	184	117	157	161	190	153
Hotels and restaurants	726	270	260	280	319	249
Personal services	157	198	121	180	139	168
Three broad sectors of the economy						
Goods production	42	95	83	87	74	72
Market services	151	112	135	126	134	126
Public services	101	88	83	72	69	71

Note: hours count (FTE) based on hourly wages.
Source: RSF, 2009 (Calculated from European Community Household Panel and Current Population Survey, CEPR extract of ORG)

Table A5: Low-wage employment gaps to US: shift-share decomposition by industries, 2001

Percentage-points of employment (hours-count based between brackets)

	Total difference		due to different incidence		due to other sectoral structure		interaction	
Denmark	-11.7	(-13.2)	-10.4	(-12.5)	-2.4	(-2.1)	+1.1	(+1.0)
France	-8.1	(-7.7)	-6.4	(-6.5)	-3.2	(-2.2)	+1.5	(+1.0)
Germany	-0.3	(-2.0)	+3.3	(+0.9)	-3.6	(-2.9)	-0.1	(-0.4)
Netherlands	-1.0	(-5.3)	+1.4	(-3.9)	-2.5	(-2.5)	+0.1	(+0.3)
United Kingdom	-1.5	(-3.7)	+0.3	(-2.7)	-2.1	(-2.1)	+0.3	(+0.2)

Notes: all, including working <15 hours per week, except France where no detail is available for this category, which is also a tiny fraction of employees.
Sources: analysis of ECHP and CPS-ORG, see Mason and Salverda (2008)

Table A6: Tax rates at different wage levels for full-time workers, 2000 and 2006

	2000 MW	67% AW	AW	2006 MW	67% AW	AW
	Percent of gross wage			Percent of gross wage		
A. Average tax rates including employee social contributions						
DK	Na	40.8%	44.1%	na		
FR	21.0%	25.7%	28.8%	16.7%	26.1%	29.1%
DE	na	38.1%	44.5%	na		
NL (a)	26.6%	32.6%	33.2%	22.6%	31.2%	36.1%
UK	11.7%	22.2%	25.5%	12.7%	23.7%	26.8%
US	16.3%	21.1%	23.9%	14.5%	20.6%	23.4%
B. Payroll taxes and employer contributions						
DK	na	0.7%	0.5%	na		
FR	23.0%	41.2%	41.2%	17.6%	33.3%	42.3%
DE	na	20.5%	20.5%	na		
NL (a)	15.0%	16.1%	10.7%	14.7%	15.8%	15.0%
UK	5.2%	8.8%	9.9%	6.8%	9.7%	10.7%
US	8.2%	8.0%	7.9%	8.2%	7.9%	7.8%

MW = Minimum wage
AW =Average wage
Note: (a) Minimum-wage amounts mentioned for the Netherlands were wrong and in private communication we have obtained from the author an adapted dataset that is used here.
Source: Immervoll (2007), Table 3.

Table A7: Annual leave and public holidays, circa 2001

Country	Statutory minimum annual leave entitlement	Average annual leave entitlement*	Statutory paid holidays per year	Public holidays per year
Denmark	25	30.0	9	9.5
France	30	**30.0	1	11.0
Germany	24	29.1	10	10.5
Netherlands	20	31.5	0	8.0
UK	20	24.5	0	8.0
USA – medium and large private sector employees	0	***16.9	0	10.0
USA – all workers	0	9.0	0	6.0

* Average collectively agreed entitlement for EU countries, average vacation days in medium and large private sector for USA.
** Source as in Column 1 for France.
*** After 10 years' service in medium and large private sector.
Sources:
Columns 1 and 3 plus 'USA – All workers' estimates in Columns 2 and 4: Ray and Schmitt (2007), *No Vacation Nation*, Center for Economic and Policy Research.
Columns 2 and 4 excluding 'USA – All workers' estimates: European Industrial Relations Observatory, *Industrial relations in the EU, Japan and USA*, 2001.

Table A8: Average annual hours worked per worker, part-time employment rates and usual weekly hours of work, various years

	Average annual hours worked per worker			**Part-time employees as percent of total employment, 2004**		**Usual weekly hours of work most frequently reported[a]: male employees in their main job, 2002**			
	1984	*1994*	*2004*	*Males*	*Females*	Major peak-hours	% working those hours	Minor peak - hours	% working those hours
Denmark	1502	1495	1454	12	25	37	53	45	7
France	1651	1582	1441	5	23	35	42	39	14
Germany	-	1536	1443	7	39	40	37	38	19
Netherlands	-	1362	1357	15	61	40	40	38	17
UK	1729	1736	1669	10	39	40	14	38	8
US	1869	1864	1824	8	18	40	63	50-54	9

a) For example, for Denmark in 2002, the data show that the most commonly reported level of hours per week was 37 and that 53% of male employees reported working that number of hours.
Sources: Hours worked: OECD Employment and Labor Market Statistics, 2006; Part-time employment and usual weekly hours of work: OECD Employment Outlook, 2006 (including Statistical Supplement).

Table A9: Indicators of job quality and security, 1984, 1994 and 2004

	Average job tenure (a)		**Temporary employment (b)**			**Involuntary part-time employment (c)**		
	1994	**2004**	**1984 (d)**	**1994 (e)**	**2004 (f)**	**1984 (d)**	**1994**	**2004**
Denmark	8.5	8.7	12.5	12.0	9.8	12.7	16.4	13.4
France	10.8	11.5	3.3	11.0	12.3	..	31.5	24.2
Germany	10.1	10.8	10.0	10.3	12.2	5.7	7.0	13.8
Netherlands	9.1	10.6	7.5	10.9	14.6	11.2	5.2	3.9
United Kingdom	8.3	8.4	6.2	6.5	5.7	8.6	12.0	6.0
United States	..	..	..	5.1	4.0	12.5	14.2.	13.9

.. Data not available.
a) Data on average job tenure in current job with the same employer are expressed in numbers of years.
b) Temporary employment (including temporary agency workers) as a percentage of total employment.
c) Share of involuntary part-time employment among part-time employment.
d) Netherlands 1985
e) US 1995
f) Germany 2003, US 2001
Source: OECD Employment Outlook, 2006 (Statistical Supplement) and, for US involuntary part-time employment, Mishel *et al.* (2007), table underlying Figure 4V.

Table A10: Types of pension provision and gross replacement rates from mandatory pensions, recent year, circa 2004

	First tier: Universal coverage, Redistributive (a)	**Second tier: Mandatory Insurance**	**Gross replacement rates from mandatory pensions (b)**	**Main types of private pension (c)**	**Coverage by private pensions**
	Type of scheme		*% of earnings for average earner*	*Type of scheme (coverage: % of workforce)*	*% of workforce*
Denmark	Resource-tested + Basic	Private	76	Mandatory personal (>90), Quasi-mandatory occupational (>80)	>90
France	Resource-tested + Minimum	Public	51	Voluntary occupational (10), Voluntary personal (8)	18
Germany	Resource-tested	Public	40	Voluntary occupational (57), Voluntary personal (13)	63
Netherlands	Basic	Private	82 (d)	Quasi-mandatory occupational (>90)	>90
United Kingdom	Resource-tested + Basic + Minimum	Public	31	Voluntary occupational (43), Voluntary personal (16)	51
United States	Resource-tested	Public	41	Voluntary occupational (47), Voluntary personal (17)	56

Notes:
(a) Resource-tested pension schemes pay higher benefits to poorer pensioners than to better-off ones. Minimum pensions have a similar redistributive purpose but do not take account of any other income apart from pension income.
(b) The gross replacement rate is defined as gross pension entitlement divided by gross pre-retirement earnings.
(c) Occupational pension schemes are employer-based. Personal schemes are individual-based. Quasi-mandatory schemes are typically based on collective agreements. For the UK voluntary private schemes refer to schemes whose members are contracted out of the state second pension.
(d) This figure needs to be treated with caution. The maximum entitlement from the first and second pillars is 70% of earnings, but usually only after 40 years of contributions. However, many employees do not achieve this level of entitlement.
Source: OECD, Pensions at a Glance, 2007, Table I.1, Retirement-Income Indicators (p33), Table II.2.1, Figure II.2.2.

Table A11: Gross and net replacement rates from mandatory pensions, recent years, circa 2004

	Gross replacement rates from mandatory pensions: % of gross pre-retirement earnings (a)			**Net replacement rates from mandatory pensions: % of net pre-retirement earnings (b)**		
	For persons on 50% of average earnings	*For persons on 75% of average earnings*	*For average earner*	*For persons on 50% of average earnings*	*For persons on 75% of average earnings*	*For average earner*
Denmark	120	90	76	133	102	87
France	64	51	51	78	65	63
Germany	40	40	40	53	57	58
Netherlands	81	82	82	97	104	97
United Kingdom	34	38	31	66	49	41
United States	44	46	41	67	58	52

Notes:
(a) The gross replacement rate is defined as gross pension entitlement divided by gross pre-retirement earnings.
(b) The net replacement rate is defined as the individual net pension entitlement divided by net pre-retirement earnings, taking account of personal income taxes and social security contributions paid by workers and pensioners.
Source: OECD, Pensions at a Glance, 2007, Retirement-Income Indicators (pp 33, 35).